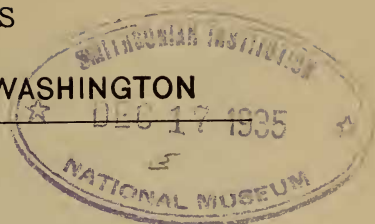


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONNEW BIRDS FROM PERÚ, BRAZIL, AND COSTA
RICA.BY JOHN T. ZIMMER.¹

Recent study of the collection of birds secured by the Captain Marshall Field Peruvian Expedition of Field Museum of Natural History in 1922-23, has revealed the existence of a number of new subspecies which seem to be worthy of recognition. Most of the new forms here described were obtained by the expedition mentioned; the others appeared in material used for comparative study. Descriptions of other new forms from the same source have been published in Field Museum of Natural History Publication, Zoological series, vol. 12, no. 4, 1924; tom. cit. No. 8, 1925; and the present publication, vol. 40, 1927.

The type specimens of the forms described below are in the collection of Field Museum of Natural History, as are all other specimens not otherwise accredited. Acknowledgments are due to Dr. Frank M. Chapman, American Museum of Natural History, New York; to Mr. W. E. C. Todd, Carnegie Museum, Pittsburgh; to Mr. O. Bangs, Museum of Comparative Zoology, Cambridge; and to Drs. C. W. Richmond and A. Wetmore, U. S. National Museum, Washington. Comparative material generously loaned from these sources has been of great assistance in establishing the relationships of the various species and subspecies. I am indebted further to Dr. C. E. Hellmayr for notes on certain specimens in European museums and for freedom of access to manuscript notes of the late Count Berlepsch, which have aided in the study.

Names of colors when capitalized indicate direct comparison with Ridgway's "Color Standards and Color Nomenclature."

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Xenops rutilus septentrionalis, subsp. nov.

Type from Guayabo, Costa Rica. No. 35744, Field Museum of Natural History. Adult male collected January 29, 1908, by J. F. Ferry; original number 243.

Diagnosis.—Similar to *X. r. purusianus* from Hyutanahán, Rio Purús, Brazil, but differs by having the pale streaks on the top of the head more rufescent and less buffy; back less strongly marked, with deeper ochraceous streaks; breast, flanks, and belly more narrowly streaked with pale shaft-lines; under tail-coverts averaging more rufescent in tone and less sharply streaked; tail with less black, having none on the outer webs of any of the rectrices except a minute shade at the extreme base, the black being confined almost entirely to the inner webs of the third and fourth and the basal half of the second outer feathers. From *X. r. heterurus* of Bogotá, Colombia, it is separable by the much lesser amount of black on the tail and by the narrower streaking below, together with somewhat smaller size. Wing (four males) 65–68 mm., average 67; tail 44–50, average 46.25; culmen from base 14–14.5, average 14.25; exposed culmen 10.5–13, average 12.5; tarsus 13–15, average 14.

Habitat.—Central America, in Costa Rica (Juan Viñas and Guayabo) and Panamá (Boquete).

Description of type.—Top of head Mummy Brown with narrow shaft-streaks of deep Cinnamon-Buff, broadest on forehead; mantle Brussels Brown with pale ochraceous shaft-lines becoming obsolete on the lower border; mantle separated from the more dusky nape by an ill-defined and narrow collar which is slightly more rufescent than either the head or mantle; rump and upper tail-coverts light Sanford's Brown grading insensibly into the color of the mantle. Loes white with a dusky area immediately in front of the eye; a broad superciliary stripe of slightly buffy white from the loes to the nape; a postocular stripe of Mummy Brown; auriculars dull white with dark brown edges; a broad, conspicuous subauricular stripe of silky white; sides of the neck like the back but the edges of the feathers grayer brown and the central stripes broader and whiter. Chin and throat dull white; sides of the lower throat, breast, sides, belly, and flanks Hair Brown x Olive Brown with narrow shaft-streaks of faintly buffy white, broadest on anterior portions; under tail-coverts Buffy Brown with whitish shaft-streaks less sharply defined than those on the remainder of the under parts. Under wing-coverts tawny Ochraceous Buff. Upper wing-coverts Snuff Brown with an ill-defined blackish or dusky area on the inner webs; primaries and secondaries largely black, narrowly margined externally with Sanford's Brown x Amber Brown, and with a broad band of Ochraceous-Tawny across both webs of the median portion of the quills from the fourth outer primary to the penultimate inner secondary; the ochraceous color deeper and more tawny on the outer webs of the secondaries where it forms a bright patch visible on the closed wing; outer three primaries black except for the pale outer margin; inner secondary with a paler and more orange-tinted sub-basal area continuous with the band on the other quills but not so sharply

defined; blackish distal patch on this quill reduced to an ill-defined dusky area; beginning with the sixth outer primary, the tips of the primaries and secondaries are Amber Brown x Sanford's Brown, forming a narrow terminal margin on the primaries and a wider band on the secondaries; tertials entirely Amber Brown x Sanford's Brown. Rectrices light Auburn; outermost rectrix entirely of this color; second with the basal third of the inner web, adjacent to the shaft, dusky; third with a broad black stripe on the inner web from the base to near the tip, not reaching the inner margin; fourth similar to the third but black region a little broader and longer, leaving a narrower rufous inner margin and tip; fifth and innermost rectrices entirely light Auburn. There is no black on the outer webs of any rectrix except for a dusky shading at the very base. Wing 66 mm.; tail 45; culmen from base 14.5; exposed culmen 11; tarsus 15.

A specimen from Juan Viñas, Costa Rica, has a small dusky spot on the inner web of the fifth rectrix near the tip. One specimen from Boquete, Panamá, has the blackish area on the third rectrix more or less broken about a third of the way from the tip. All four examples examined agree in the absence of black on the outer webs of the remiges.

Peruvian specimens of *purusianus* are very close to this Central American form and agree with it in the disposition of the black markings on the tail, thereby differing from the average of topotypical *purusianus*. However, one male from Hyutanahán has very little more black on the tail than have the Peruvian specimens, and as the latter agree with *purusianus* in other respects, according to the series at hand, it seems best to consider them as *purusianus*, at least for the present.

On the other hand, the Central American birds, while showing affinity to *purusianus* through the Peruvian examples, are cut off from the range of that form by *heterurus*, which appears to occupy all three chains of the Andes in Colombia. Although *purusianus* was originally described as having a tail-pattern like that of *heterurus*, the material at hand tends to show that the black areas are rather more extensive in *heterurus*, occupying the larger part of the outer webs of the fifth as well as the fourth rectrices; in some specimens of *purusianus* there may be a certain amount of black on the basal portion of those webs but it does not extend so far toward the tip, and in other examples it is but little more extensive than in *septentrionalis*.

Specimens examined:

X. r. rutilus—Brazil: "Bahia" 1 ? ; Rio de las Velhas 1 ♂ 2 ♀ ; Victoria, São Paulo 1 ♂ ; Barra do Corda, Maranhão 1 ♂ 1 ♀ . Argentina: Puerto Segundo, Misiones 1 ♂ .

X. r. connectens—Argentina: Ledesma, Jujuy 1 ♀ .

X. r. purusianus—Brazil: Hyutanahán 2 ♂ 1 ♀¹; Arimã, Rio Purús 1 ♂ 1 ♀¹. Perú: Chinchao 1 ♂ ; Huachipa 2 ♂ 1 ♀ .

X. r. guayae—Ecuador: Puente de Chimbo 1 ♀ .

X. r. heterurus—Colombia: "Bogotá" 6 ? ; Santa Elena, Antioquia 1 ? .

¹Specimens in Carnegie Museum, Pittsburgh.

X. r. septentrionalis—Costa Rica: Guayabo 1 ♂ (type); Juan Viñas 1 ♂.
Panamá: Boquete 2 ♂¹.

***Pipra coronata circumpecta*, subsp. nov.**

Type from Munichis, Yurimaguas, Perú. No. 50897, Field Museum of Natural History. Adult male collected September 1, 1912, by M. P. Anderson; original number 29.

Diagnosis.—Closely allied to *P. c. exquisita* from central-eastern Perú but male slightly more obscure on the upper back, duller green on the breast, and duller yellow in a more restricted area on the belly; top of the head slightly darker blue, completely encircled by a border of much deeper blue which includes the forehead, upper part of the lores, supercilium, postocular region above the auriculars, and hind neck, which are clear green in *exquisita*; wing-quills browner, less blackish, with paler inner margins.

Habitat.—Northern Perú south of the Marañon River; Yurimaguas and Chyavetas.

Description of type.—Back bright Grass Green, brighter on the rump, somewhat darker anteriorly; hind neck Cossack Green; auriculars and lower part of the lores Dull Blackish Green. Top of the head Pale Cerulean Blue (the feathers sooty black at their bases), completely encircled by a border of light Methyl Blue which involves the forehead, upper part of the lores, supercilium, postocular region above the auriculars, and the hind neck. Chin and throat Danube Green, passing into Bice Green on the breast and sides, Light Bice Green on the flanks, and Barium Yellow on the mid-belly and under tail-coverts. Wings and tail fuscous with the outer webs of the quills and upper coverts like the rump; inner margins of the wing-quills Pale Smoke Gray; under wing-coverts Marguerite Yellow. Maxilla blackish; mandible soiled white; feet dull brown. Wing 57 mm.; tail 25; culmen from base 10; exposed culmen 7.5; tarsus 13.5.

Although I have only a single specimen of this well-marked form, I do not hesitate to describe it since its characteristics have already been noted in other material from northern Perú. A specimen from Chyavetas was recorded as *Pipra cyaneocapilla* by Sclater and Salvin (Proc. Zool. Soc. London, 1867, p. 751) and by Taczanowski (Orn. Pérou, 2, p. 344, 1884). This same example and another from the Río Huallaga were recorded as young males of *cyaneocapilla* by Sclater (Cat. Birds Brit. Mus., 14, p. 300, 1888). Hellmayr (Ibis, 1906, p. 36) found that these two specimens were fully adult though differing somewhat from typical *exquisita*, to which they were most closely related, and possibly belonging to a separable form. The reappearance of the same peculiarities in the Moyobamba specimen indicates the apparent stability of the characters in birds from that region.

I place this new race in the species *coronata* at the suggestion of Dr. Hellmayr, who has worked out the relationship of *coronata* and *exquisita* in his forthcoming treatment of the family Pipridae.

¹Specimens in Museum of Comparative Zoology, Cambridge.

Specimens examined:

P. c. exquisita—Perú: Puerto Bermúdez 3 ♂ 1 ♀.

P. c. circumpicta—Perú: Munichis, Yurimaguas 1 ♂ (type).

***Pipra pipra microlopha*, subsp. nov.**

Type from Puerto Bermúdez, Rio Pichis, Perú; altitude 1100 feet. No. 65801, Field Museum of Natural History. Adult male collected March 18, 1923, by J. T. Zimmer; original number 3521.

Diagnosis.—Somewhat intermediate between *P. p. comata* and *P. p. coracina* in the degree of gloss on the black plumage, but differing from both the others by having a shorter, more rounded crest; the bases of the feathers of the forehead, and sometimes of the whole crown, white, quite different from *coracina* though sometimes equaled by *comata* in this respect.

Habitat.—Northeastern Perú and western Brazil south of the Amazon River; from the Ucayali eastward to São Paulo de Olivença and probably as far as the Juruá; tropical zone.

Description of type.—General color bluish black, slightly more silky than in *coracina* but not as glossy as in *pipra* and *comata*. Whole top of the head, including nuchal crest, white, but the crest is rather short, tapering posteriorly to form an oval point in the middle of the hind neck instead of being produced into a flattened, broadly rounded collar lying over the upper part of the mantle as in the other races. The feathers of the forehead and crown, back to the posterior border of the eyes, are entirely white; those of the rest of the cap are narrowly pale gray at the base. Wings and tail sooty black with the exposed outer edges and tips bluish black like the back. Wing 65 mm.; tail 28; culmen from base 11; exposed culmen 9; tarsus 14; length of cap 27.

Young males are, above, dark Kronberg's Green, much darker than the dark Yellowish Oil Green of *comata*, with the whole top of the head dark gray, more or less washed with green. Below, Mineral Gray, somewhat washed with Kronberg's Green on the breast and flanks and slightly tinged with green on the throat. Feathers of the crown with a trace of black on each side of the shaft at the base; some new white feathers which have appeared on the head of one of the specimens are white to the base as in the adult. One immature male, possibly younger than the others, has rather more green on the breast and a wash of the same color on the top of the head, while the mandible is pale yellow except at the extreme tip, not blackish as in the other immature examples and the adults.

A female is similar to the young males but has the back a little lighter in color, about Kronberg's Green; top of the head lighter gray, washed with green; throat whitish, washed with pale Lime Green; breast dark Tea Green; middle of belly white, tinged with Sea-foam Yellow in the anal region, less strongly on the under tail-coverts; flanks Deep Grape Green. Wing 63 mm.; tail 26.5; culmen from base 12; exposed culmen 9; tarsus 14.

Among the adult males of this form there seems to be little or no variation in the degree of gloss on the black feathers. The white cap is always short and oval at the tip, although the exact length is slightly variable.

The feathers of the forehead are white to the base in all the specimens; those of the crown are also white in the type specimen. In one male from São Paulo de Olivença, Brazil, the feathers of the crown at base are narrowly very pale gray, and those of the occiput are somewhat darker. One specimen from Orosa, Perú (nearly opposite the mouth of the Napo River) is a little darker in this respect, and two others from the same locality are even more marked, but none of the series is as heavily marked as typical *coracina*, which has the basal portion of the cap, sometimes including most of the forehead, much deeper and more broadly black. The type of *microlopha* apparently resembles the type of *comata* (as the latter was originally described) in having the crown feathers white to the base, but whereas *comata* was described on account of its unusually long crest, *microlopha* is notable for its very short crest.

The extent of the dusky bases on the head is not constant, even in *comata*; two males from Uchco have the glossy plumage and long crest of *comata*, but the feathers of the crown are distinctly blackish at the base, possibly in an approach toward *coracina* which occurs not far distant, at Pomará. On the other hand, a Yurimaguas male has the crown and occiput pale gray at base. This specimen seems to be abnormal. It is exceptionally small (wing 60 mm.; tail 25) and exhibits traces of albinism in various parts of its plumage, but its crest is proportionately long and broad at the tip, and its plumage is as glossy as in typical *comata*.

A male from the mouth of the Curaray River, eastern Ecuador, seems to be intermediate between *pipra* and *microlopha*, having a moderately short crest with considerable white at the base of the crown feathers combined with a heavily glossed plumage which is somewhat lighter in tone than that of most examples of *pipra*.

Ihering (Rev. Mus. Paulista, 6, p. 435, 1904=May, 1905) records *leucocilla* (= *pipra*) from the Juruá region. This record certainly refers to the present new form since there is no allied form south of the Amazon except far to the eastward, on the Tocantins, where *bahiae* occurs.

The measurements of five adult males of *microlopha* are as follows: wing 65–69 mm., average 67.2; tail 27–29, average 28.4; culmen from base 11–12, average 11.5; exposed culmen 8.5–9.5, average 9; tarsus 14; length of white cap 25–27.5, average 26.3.

The use of the specific name *pipra* instead of *leucocilla* is, I believe, necessary. In 1758, Linnaeus described "*Parus Pipra*," which he based on Seba's account of the "Cacototl" (Thes., 2, p. 102, pl. 96, fig. 5). Seba's description and figure unmistakably represent a white-crowned manakin with a glossy black body, and as Seba is the only earlier authority quoted by Linnaeus in this connection, his species is entitled to the name *pipra*. Unfortunately, Linnaeus, after citing Seba and quoting an abbreviated diagnosis from his work, appended a more complete description of a totally different species (a flycatcher), which disagrees not only with Seba's account but also with a short diagnosis of his own which he quoted from his then unpublished "Museum Adolphi Friderici." In the latter work, published six years later, he erected the genus *Pipra*, applied a new name, *leucocilla*, to his own earlier diagnosis of *P. pipra* (which he elaborated but did not otherwise alter), and repeated his more lengthy description

of the flycatcher under the name *leucocephala* (= *Arundinicola leucocephala*); but he again confused matters by referring Seba's account to *leucocephala* in spite of the obvious disagreement. No mention was made of the name *pipra* in either connection. Two years later, in the twelfth edition of the *Systema Naturae*, the names *leucocilla* and *leucocephala* were again used for the two distinct species, and here the original *Parus Pipra* was definitely identified as *leucocilla*, although it was erroneously placed in synonymy in spite of its six years of priority. By this association, Linnaeus, as first reviser, succeeded in separating the integral parts of the composite *Parus Pipra* and in allocating the original name to one of the parts. Berlepsch and Hartert (*Novit. Zool.*, 9, p. 53, footn., 1902) were unjustified in rejecting the name *pipra*, and Ridgway (*Bull. U. S. Nat. Mus.*, 50, pt. 4, p. 744, 1907) used the name correctly.

Linnaeus's original reference gives the type locality of *pipra* as "in Indiis," which is not sufficiently definite for modern zoology. It is antedated by Seba's "montagnes de Tetzcocanara" which that author, in another connection, places "au Bresil"; but there is considerable doubt attached to this name. In the first place, both Tetzcocanara and Cacototl suggest Mexican, rather than Brazilian, origin. Seba's reference to Hernandez in connection with another species also said to be from Tetzcocanara gives a clue to the probable explanation. Hernandez (*Rev. Med. Nov. Hisp. Thes.*, *Hist. Animal.*, lib. unic., p. 52, cap. CXCVII) gives the description of a bird which he calls "Cacototl" from the "planis Tetzcoquensibus" in Mexico. There is not much doubt that Seba took name and locality from this account, although his own description (which does not agree at all with that of Hernandez) was drawn up from specimens which he received from a Jacques Guillot of Amsterdam who, in turn, probably secured them from Surinam. In any case Seba's species does not occur in Mexico and Tetzcocanara or Tezcucocan can not well be the type locality of the bird which he described and figured. Linnaeus's citation of Brazil and Surinam, in the twelfth edition of the *Systema Naturae*, in connection with *leucocilla*, is probably correct, and Surinam, as the most definite locality given, should be designated as type locality for *Parus Pipra*. The Cacototl of Hernandez has yet to be identified.

Specimens examined:

- P. p. pipra*—Surinam: Rijdsdijkweg 1 ♂. British Guiana: Saint Laurent du Maroni 2 ♂; Hyde Park 2 ♂; Demerara 1 ♂; Caramang River 3 ♂. Brazil: Conceição, Rio Branco 2 ♂ 1 ♀; Itacoatiará 1 ♀; Manacapurú, Rio Solimões 3 ♂¹.
- P. p. anthracina*—Panamá 1 ♂.
- P. p. coracina*—Colombia: "Bogotá" 1 ♂. Ecuador: Guayaba, Loja 1 ♂². Perú: Pomarã 1 ♂².
- P. p. comata*—Perú: Vista Alegre 1 ♂ ad., 1 ♂ imm.; Huachipa 1 ♂ 1 ♀; Chinchao 1 ♂ 1 ♀; Uchco 2 ♂²; Munichis, Yurimaguas 1 ♂.
- P. p. microlopha*—Perú: Puerto Bermúdez 1 ♂ ad. (type), 4 ♂ imm., 1 ♀; Orosa 3 ♂². Brazil: São Paulo de Olivença 1 ♂¹.
- P. p. ?*—Ecuador: mouth of Río Curaray 1 ♂².

¹Specimens in Carnegie Museum, Pittsburgh.

²Specimens in American Museum of Natural History, New York.

***Phrygilus unicolor inca*, subsp. nov.**

Type from the mountains near Huánuco, Perú; altitude 12200 feet. No. 60073, Field Museum of Natural History. Adult male collected June 19, 1922, by J. T. Zimmer; original number 2404.

Diagnosis.—Similar to *P. u. unicolor* of northern Chile, but smaller and decidedly darker above and below; more sooty, less ashy.

Habitat.—Highlands of Perú.

Description of type.—Above, Slate Gray. Below, Dark Gull Gray, slightly paler and duller near the crissum. Wings and tail black; upper wing-coverts bordered with the color of the back; alula with the outer border a little paler, about the color of the breast; second to fifth outer primaries with their outer margins distinctly white except toward the tips of the quills; outermost primary with the outer margin slightly grayer than the rest of the outer web, faintly tinged with brown; inner primaries, secondaries and tertials with outer margins the color of the back, becoming paler and more whitish near the tips. Rectrices with outer margins the color of the breast, inclining toward whitish. Under wing-coverts gray like the breast. Iris brown; bill brownish black; feet dull brown. Wing 85 mm.; tail 57.5; culmen from base 13.5; exposed culmen 11; tarsus 23.

Females are like the males and sometimes almost indistinguishable, but are usually paler below, between Gull Gray and Deep Gull Gray, with indistinct dusky shaft-lines; belly and crissum approaching Pale Gull Gray. Above, the feathers of the head and back have broad dusky shaft-lines, rather ill-defined, and sometimes have a brownish tinge on the margins, but the color is still definitely gray and quite distinct from the brown of the young birds.

Both sexes in juvenal plumage are closely streaked throughout. Above, the blackish brown shaft-stripes are margined with buffy brown on the crown, with Hair Brown on the upper back, and with Sepia on the middle back. Below, the feathers are dark Clove Brown in their centers, edged with whitish Pale Olive Buff. A characteristic feature is an area of Dark Olive Buff on the sides of the face, including the lores, auriculars, malar region and eyelids. The upper wing-coverts are brownish black margined with buffy brown. Wings and tail are margined externally with grayish buffy brown. In this plumage, *inca* is easily separated from *unicolor* by the much broader and darker streaks on the upper and under parts, by the darker edges of the dorsal feathers, and by the olivaceous sides of the face.

Males in first annual plumage are similar to the juvenals in being streaked above and below, but the streaks are much less pronounced (especially below), the whole tone of coloration is much grayer and less buffy, and the sides of the face have lost the curious olive color.

It is not my intention to enter here into a detailed discussion of the various plumages of this and related species as I hope to do in a later paper. Suffice it to say that there is evidence at hand which indicates that both sexes are very much alike in *unicolor*, *tucumanus*, and *inca*, but noticeably different in some of the more northern races.

The present form probably is more closely approached by *tucumanus* than by typical *unicolor*, to which I have compared it in the diagnosis, since *tucumanus* also is smaller and darker than *unicolor* though it does not go so far in this direction as typical *inca*. Specimens from Tucumán are farther removed from both *unicolor* and *inca* than are Bolivian examples, which show an approach to *unicolor* in size and to *inca* in color but remain closest to *tucumanus*.

Three adult males of *inca* measure as follows: wing 81–89.5 mm., average 85; tail 56–60, average 57.8. Six adults of *tucumanus* (marked as males) from Tucumán measure: wing 85.5–89 mm., average 87.8; tail 61–65, average 62.5. Six males of *tucumanus* from Bolivia measure: wing 91–96 mm., average 92.6; tail 61.5–69, average 63.75. Nine males of *unicolor* from Chile measure: wing 91–98 mm., average 93.4; tail 62–68, average 64.5. Females of all three forms are a little smaller than the males in average measurements.

North of the range of *inca* occurs the Ecuadorean form, *grandis*, which is again larger than paler than *inca*, being more like topotypical *tucumanus* in color and Bolivian *tucumanus* in size, although it has a longer bill than either. The Peruvian form described herewith exists as a small, dark race replaced by larger, paler forms both to the north and south.

The general failure to recognize this Peruvian race heretofore may be attributed to a protracted misidentification of *unicolor*. The species, *unicolor*, was described by d'Orbigny and Lafresnaye from the Cordillera of Tacora, Perú, and the Pampa de Oruro, Bolivia, and Tacora usually has been considered, as it may be more formally designated, as the type locality. Tacora belonged to Perú at the time the species was described, and most authors, misled by this fact, have referred all Peruvian specimens of this group to the Tacora form without having examined topotypes. Tacora now belongs to Chile, being situated not far from Choquelimpie, and specimens from Choquelimpie agree with others from other parts of Chile but differ from Peruvian examples. Thus, while Peruvian specimens of this group have long been known and Chilean examples have been comparatively rare, the latter appear to be entitled to the name *unicolor*, leaving the Peruvian race in need of formal description.

In 1844, Tschudi (Arch. Naturg., 10, (1), p. 290, no. 162, May, 1844) described *Phrygilus rusticus* from Perú. This name has been placed in the synonymy of *unicolor* by various authors and, if it referred to the present species, it would be valid for the race I have described here as *inca*. Dr. Hellmayr has kindly examined Tschudi's type in the Berlin Museum and pronounces it a molting, immature specimen of the bird long known as *Spodiornis jardini* Selater, over which latter name *rusticus* thus has priority. Tschudi's description reads as though the author had had several specimens before him of different sexes and ages. Ten years after Tschudi's description appeared there was but a single specimen of the species in the Berlin Museum (cf. Lichtenstein, Nom. Av. Mus. Berol., p. 43, 1854) and it is evident that Tschudi composed his description of the various plumages of his species from this single molting example.

In any case, *Phrygilus rusticus* Tschudi does not affect the nomenclature of *P. u. inca*.

Specimens examined:

P. u. unicolor—Chile: Choquelimpie, Tacna 1 ♂ 1 ♀; San Pedro, Antofagasta 9 ♂ 2 ♀; Baños del Toro, Coquimbo 1 ♂ 2 ♀; Cajon del Rio Blanco, Vega Redonda 2 ♂; Valle de Los Piuquenes, Vega Redonda 1 ♀; Guardia Vieja, Aconcagua 1 ♂.

P. u. tucumanus—Argentina: Las Pavas, Tucumán 9 ♂ 11 ♀ (as sexed by the collector). Bolivia:¹ Calugo, Cochabamba 1 ♀; near Cochabamba 1 ♂; Coloni 5 ♂; Incachaca 1 ?; Cerro San Benito 3 ♀; Mollemolle 1 ♂.

P. u. inca—Perú: Huánuco, mountains at 12200 feet 3 ♂ (including type) 4 ♀; La Quinua 1 ♂; mountains near Balsas 1 ♂ 1 ?.

P. u. grandis—Ecuador: Pichincha, 14000 feet 1 ♂ 2 ♀.

***Chlorophanes spiza axillaris*, subsp. nov.**

Type from Bahia, Brazil. No. 9701, Field Museum of Natural History. Adult male; no date; ex collection C. B. Cory, ex collection Lawrence.

Diagnosis.—Similar to *C. s. spiza* from British Guiana, Trinidad, and Venezuela, but general color of males more greenish, less bluish, especially on the belly; hind neck without the yellowish tone which is usually pronounced in *spiza*; under wing-coverts and thighs decidedly paler, light gray instead of sooty black.

Habitat.—Southeastern border of Brazil from Pernambuco to Santa Catharina.

Description of type.—Whole top and sides of the head occupied by a black hood which extends from the base of the mandible along the lower border of the malar region to the auricular orifice, thence upward and a little forward to the postocular region where the line curves backward around the rear of the occiput. Held away from the light (toward the light all greenish colors are bluer) the hind neck appears Chrysopraxe Green; back light Viridian Green; point of the chin black; remainder of under parts Cobalt Green x Vivid Green. Wings and tail black with the upper wing-coverts and outer margins of the remiges and rectrices similar to the back but a little duller; tertials and middle rectrices largely of the same color. Under wing-coverts, axillaries, and thighs Light Mouse Gray with moderately pronounced pale greenish tips, heaviest on the outer margin of the wing. Maxilla black with an angular yellow area at the base of the commissure below the nostril; in lateral view this reaches forward about to the middle of the commissure; in dorsal aspect it appears to end about at the anterior end of the nostril. Mandible entirely yellow; feet olivaceous. Wing 68.5 mm.; tail 46; culmen from base 18.5; exposed culmen 15; tarsus 18.5; length of black cap in the middle 22.

One female from Bahia appears to be deeper and less yellowish green than four females of *spiza* from various localities, but I am not assured of

¹Specimens from Bolivia in Carnegie Museum, Pittsburgh.

the stability of this character. Wing 64.5 mm.; tail 45; culmen from base 18.5; exposed culmen 14.75; tarsus 16.

In addition to the material listed below, I have notes which Dr. Hellmayr has kindly made on an adult male from Blumenau, Santa Catharina, and two adult males from Braço do Sul, Victoria, in the Munich Museum, in comparison with sixteen males of typical *spiza* from Caparo, Trinidad. These notes confirm the characters which I have given for the southeast Brazilian race. They also indicate the existence of a longer black cap in *axillaris* than in *spiza*, but two males of *spiza* from Trinidad, in the collection of Field Museum of Natural History, have the cap longer than in the type of *axillaris*, showing the variability of this feature. The type of *Turdus micans* Hahn, in the Munich Museum, proves to be typical *spiza*, and two males from Pará show no trace of approach toward *axillaris*, being also typical *spiza*.

The western limits of the range of this new form are uncertain. Ihering (Cat. Faun. Braz., 1, p. 344, 1907) records the species from Matto Grosso, but I suspect that the variety occurring there will be found to be *caerulescens* and not *axillaris*; I have no material to determine the point.

Specimens examined:

- C. s. spiza*—British Guiana: no locality 1 ♂; Caramang River 2 ♀. Trinidad: Valencia 2 ♂ 1 ♀. Venezuela: Guanacos, Orinoco delta 1 ♂. Brazil: Pará 1 ♀; Santarem 1 ♀¹. Colombia: "Bogotá" 2¹ ♂ 1 ♀, 1 ♀².
- C. s. axillaris*—Brazil: Bahia 1 ♂ (type) 1 ♀, 3 ♂¹; Rio de Janeiro 1 ♂¹; Pernambuco 4 ♂¹.
- C. s. caerulescens*—Perú: Moyobamba 1 ♀; Huachipa 1 ♂; Vista Alegre 3 ♂; Río Colorado, Chanchamayo 1 ♀, Puerto Bermúdez 1 ♂ imm., 1 ♀. Colombia: Honda 1 ♀².
- C. s. exsul*—Ecuador: Puente de Chimbo 3 ♂ 4 ♀; Paramba, Esmeraldas 2 ♂ 1 ♀.
- C. s. subtropicalis*—Colombia: Miraflores, Cauca 1 ♂, 1 ♂³; Cauca Seca 1 ♂; Chocó, Noanamá 1 ♂ 1 ♀; La Cumbre 1 ♀³; Bitaco Valley 2 ♂³; Jerico 1 ♀².

***Tangara chilensis chlorocorys*, subsp. nov.**

Type from Vista Alegre, junction of the Chinchao and Huallaga rivers, Perú; altitude 4100 feet. No. 60142, Field Museum of Natural History. Adult male collected August 31, 1922, by J. T. Zimmer; original number 2778.

Diagnosis.—Similar to *T. ch. caelicolor* from northeastern Colombia but larger; green cap longer, reaching farther posteriorly, and brighter, more yellowish green.

Habitat.—Tropical valleys of the upper Huallaga River, Perú, from the Huayabamba River and its tributaries south to the Chinchao River.

¹Specimens in Museum of Comparative Zoology, Cambridge.

²Specimens in American Museum of Natural History, New York.

³Specimens in Carnegie Museum, Pittsburgh.

Description of type.—A brilliant hood of Bright Green-Yellow, tinged with Viridine Yellow, occupies the top and sides of the head, reaching the occiput in its mid line, then extending farther backward on either side to an angle on the sides of the neck, turning forward over the ear-openings to a point at their anterior border, and passing forward thence to include the malar region, lores and forehead except for a narrow line of black feathers which completely surrounds the base of the bill and a similar narrow line of black around the eye. The feathers of this hood are small and squamiform, black at their bases and Venice Green on their concave under surfaces. Hind neck, sides of the neck behind the hood, and mantle, including the scapulars, rich velvety black. Middle of the back below the mantle occupied by a patch of brilliant Scarlet-Red x Scarlet, with the concealed portions of the feathers subterminally yellow, subbasally white, and basally gray; lower back and rump Lemon-Chrome x Light Cadmium, with the concealed portions subterminally dull buff, subbasally white and basally gray; upper tail-coverts like mantle; the extreme sides of the lower back Chrysoprase Green with black subterminal areas and gray bases. Point of the chin black, included in the black ring surrounding the base of the bill; remainder of the chin and throat Dull Blue-Violet (1); on the lower throat the feathers are subterminally bright Cendre Blue (greener if held away from the light); on the upper breast the violet tips have almost disappeared and the general color is bright Cendre Blue which extends over the breast and sides and down each flank in a broad lateral stripe; middle of the belly black with a tinge of violet blue where it meets the Cendre Blue of the flanks; thighs black with broad tips the color of the breast on each feather; under tail-coverts black. Wings and tail black; primaries, except the outermost, with outer margins the color of the throat; secondaries and tertiaries with short, narrow borders of greenish blue at the bases of the outer webs, concealed by the greater upper wing-coverts which are black, with a tiny blue spot at the tips of the outer webs; primary-coverts and alula black, edged externally like the primaries and with a small greenish spot near the tip of each feather; smallest lesser upper wing-coverts Yellow-Green in a very restricted patch which is concealed by the scapulars; remainder of the lesser coverts like the breast; median coverts like the throat; under wing-coverts mostly like the breast, those along the outer margin of the wing like the throat. Iris brown; bill black; feet bluish black. Wing 78 mm.; tail 55; culmen from base 13; exposed culmen 9; tarsus 18; length of hood in middle 19.5.

Females are similar to the males.

A young female from Huachipa, taken October 7, 1922, in general is like the adults but the cap is duller green with its feathers normal, not squamiform; the chin and upper throat are like the breast with violet feathers beginning to appear on the sides and lower border; the back is dull black; the middle of the back is yellow like the rump but is more tinged with orange. The entire plumage lacks the brilliance of coloring of the adults, even where the color is the same.

In addition to measurements secured from ten adults in the collection

of Field Museum, I have those of sixteen adults from Huambo and Huayabamba as recorded in manuscript notes of the late Count Berlepsch. These combined data show the wing to vary between 76 and 82 mm., average 79.3; tail 53–61.5, average 56.8; exposed culmen 9–10.75, average 9.7; length of hood in the middle 18–22, average 19.5.

Two adults of *T. ch. caelicolor* in Field Museum and twenty-one Bogotá skins measured by Berlepsch show the measurements of that form to be as follows: wing 72.5–80 mm., average 75.6; tail 52–59.5, average 54.9; exposed culmen 8.5–10.75, average 10.1; length of hood in the middle 15–17, average 15.8.

Berlepsch's notes confirm my observations on the difference between *caelicolor* and the form I have described as *chlorocorys*, in the color of the green hood. They also mention a reduction in the width of the black ring about the base of the bill in *chlorocorys*, but this character is not shown by the series in Field Museum and appears to be unreliable as a racial character.

The differences between *caelicolor* and *chlorocorys* are given more weight by the complete separation of the ranges of the two forms with the occurrence of a related subspecies, *chilensis*, in the intervening territory. Sclater described *caelicolor* from two specimens said to have come from Anolaima, Colombia, and these two skins represent the only records from that locality. There are many skins extant from "Bogotá," though, of course, these must have been taken in more or less distant tropical valleys and not in the vicinity of the city of that name. The known general range of the race lies to the eastward. It may be questioned, therefore, whether Sclater's specimens actually came from Anolaima or from the country on the eastern side of the range where the form is common.

Chapman (Bull. Am. Mus. Nat. Hist., 36, p. 593, 1917) records *chilensis* from Andalucía and Florencia, Colombia, and from these points the race ranges southward across eastern Ecuador and Perú to Bolivia. In Perú it has been recorded from Pebas, Iquitos, Rioja, Moyobamba, Chyavetas, Xeveros, Río Ucayali, Monterico, La Merced, Chanchamayo, Huaynapata, Marcapata, Río Cosireni and Río Comerciatá, and possibly other localities. The new form, *chlorocorys*, is known from Huambo, Huayabamba, Nuevo Loreto, Huachipa and Vista Alegre. The closest approach of the two distributional areas occurs at Moyobamba and Huayabamba; both of these places are in the Huallaga drainage, although one lies in the valley of the Río Mayo and the other in that of the Río Huambo, with a range of mountains forming a barrier open only by way of the rivers at the junction of the Río Huayabamba and the Río Huallaga. One specimen in Field Museum from Moyobamba clearly demonstrates the relationship of *chlorocorys* and *chilensis*. This bird, an adult female, has the lower back and rump pure Orange-Chrome, exactly intermediate between the red of *chilensis* and the yellow of *chlorocorys* and *caelicolor*. The entire series from Moyobamba exhibits a tone of green on the hood about intermediate between that of *chlorocorys* and that of *caelicolor*, so that *chilensis* in this particular is a connecting link between the other forms though differing from both in the color of the lower back.

Slater (Cat. Birds Brit. Mus., 11, p. 97, 1886) noted that *caelicolor* "crossed" the range of *veni* (= *chilensis*) into "N. E. Peru" (= north-central Perú), but he did not appreciate the fact that the range of his *caelicolor* was interrupted by that of the other form. Berlepsch (Ber. V. Int. Orn.-Kongr. Berlin, p. 1027, 1912) recorded the fact of divided range and in his manuscript notes, as shown above, he described the differences between Colombian and Peruvian examples. The basic facts of the case, therefore, are not entirely new although the western Peruvian form has not received a name to date.

Specimens examined:

- T. ch. chilensis*—Ecuador: Sarayacu 1. Perú: no loc. 1; Rioja 1 ♂; Yahuas, near Pebas 1 ♀; Moyobamba 5 ♂ 3 ♀; Río Colorado, Chanchamayo 3 ♂ 1 ♀ imm.
- T. ch. caelicolor*—Colombia: "Bogotá" 1. British Guiana: Roraima 1 ♂.
- T. ch. chlorocorys*—Perú: Vista Alegre 1 ♂ (type) 4 ♀; Huachipa 2 ♀ ad. 1 ♀ imm.; Nuevo Loreto near Tayabamba 3 ad.

***Thraupis episcopus caeruleus*, subsp. nov.**

Type from Vista Alegre, junction of the Chinchao and Huallaga rivers, Perú; altitude 4100 feet. No. 60288, Field Museum of Natural History. Adult male collected October 14, 1922, by J. T. Zimmer; original number 3052.

Diagnosis.—Allied to *T. e. coelestis* and *T. e. major* but purer blue than either; size about the same, covering the range of variation in *coelestis* and almost reaching the maximum of *major*. Males: wing 89–97 mm.; tail 64.5–71.

Habitat.—Tropical valleys of central and north-central Perú, from the Chinchao River north along the Huallaga to Moyobamba and Yurimaguas.

Description of type.—Held away from the light, the upper surface and sides of the head are between Glaucous Blue and Porcelain Blue; back a trifle duller and greener, approaching light Terra Verte, with the tips of the feathers indistinctly paler; rump whitish Pale Glaucous Blue; upper tail-coverts like the back, tipped with the color of the rump. Chin and throat Pale Glaucous Blue; lower throat, sides, and flanks Glaucous Blue; center of the breast strongly bluish, almost Alice Blue; under tail-coverts Pale Glaucous Blue. Remiges blackish; primaries with most of their outer webs between China Blue and Mathews Blue, becoming greener and duller, approaching Gobelin Blue, on the exposed webs of the tertials, which have also a whitish subterminal spot on their outer webs; greater upper wing-coverts and primary-coverts dusky at base, with the exposed webs dull China Blue; outer edges of primary-coverts narrowly margined with paler blue; greater series broadly margined and tipped with white, forming a conspicuous wing-bar. Tail blackish above, with the outer webs of all the retrices and the inner webs of the middle pair bright China Blue; under surface of the tail between Gobelin Blue and China Blue. Under wing-coverts Pale Glaucous Blue.

Held toward the light, all blue-green colors are much bluer. The top

of the head is a trifle duller than Yale Blue, about Neropalin Blue; the back is Orient Blue and the rump is pale Sky Gray; the center of the breast is Forget-me-not Blue and the flanks are Light Neropalin Blue; the blue edgings of wing and tail become Olympic Blue. Wing 94 mm.; tail 71; culmen from base 18; exposed culmen 13; tarsus 21.

Females are not constantly separable from males although I have seen none as intensely colored as the brightest males. The dullest female which is definitely adult is no duller than the dullest male, although the rump may be less whitish and more bluish than in the males. A certain amount of variation appears in both sexes in the amount of white on the upper wing-coverts. Examples with the least amount of white are at the greener end of the series and appear to be not quite fully adult; the most immature specimens have no trace of a wing-bar. One of the nearly adult males from Chinchao, Perú, is matched in the color of wing, tail, shoulder-patch and wing-bar (though not in the tone of body plumage) by a male of *T. e. episcopus* (also slightly immature) from Utinga, Pará, Brazil; the latter is different, in turn, from another *episcopus* taken at Manáos, Brazil, and both are different from a typical example taken in French Guiana. Adult Manáos birds show an approach toward *T. e. coelestis* but are closer to *episcopus*. Eleven males and six females of *episcopus* from various localities show considerable variation which I am unable to associate with geographical distribution.

Specimens examined:

- T. e. episcopus*—British Guiana: Potaro 2 ♂; Georgetown 1 ♂ 2 ♀; no loc. 1? . French Guiana: Saint Laurent du Maroni 1 ♂. Dutch Guiana: Paramaribo 1 ♂. Brazil: Bôa Vista 1 ♂; Manáos 1 ♀; Itacoatiará 1 ♀; Utinga, Pará 1 ♂; São Luis, Maranhão 2 ♂ 1 ♀; Barra do Corda 1 ♀; São Bento 1 ♂; Codó, Cocos 1 ♂.
- T. e. coelestis*—Brazil: Porto Velho, Rio Madeira 1 ♂ 1 ♀ imm.; Caviana, Rio Solimões 1 ♂; São Paulo de Olivença 1 ♂; Tonantins 2 ♂ 1 ♀; Manacapurú 2 ♂ 2 ♀¹.
- T. e. caeruleus*—Perú: Vista Alegre 2 ♂ (including type) 1 ♀?; Chinchao 2 ♂ ad., 1 ♂ imm., 1 ♀; Moyobamba 5 ♂ 7 ♀; Yurimaguas 2 ♀; Hacienda Limón 2 ♀ imm.
- T. e. major*—Perú: San Ramón, Chanchamayo 2 ♂ ad., 1 ♂ imm.

***Ramphocelus melanogaster transitus*, subsp. nov.**

Type from Chinchao, Perú; altitude 5700 feet. No. 60244, Field Museum of Natural History. Adult male collected October 25, 1922, by J. T. Zimmer; original number 3124.

Diagnosis.—Similar to *R. m. melanogaster* from northern Perú, but males with throat and breast paler, having only the upper breast colored like the throat or a trifle darker; this passes insensibly into the brighter red of the lower breast and flanks whereas in *melanogaster* the deep red of the throat is carried well across the chest and is separated there from the brighter red of the extreme lower breast and flanks by an abrupt line;

¹Specimens in Carnegie Museum, Pittsburgh.

interscapular region more strongly suffused with red than in *melanogaster*, approaching *R. d. dimidiatus* of Colombia and northwestern Venezuela in this respect though never so strongly red above.

Habitat.—Tropical and subtropical valleys of the upper Huallaga and Chinchao rivers, central (but not far northern) Perú.

Description of type.—Head and interscapular region between Ox-blood Red and Garnet Brown; interscapular region with concealed subterminal areas of black; lower back, rump, and upper tail-coverts between Carmine and Nopal Red. Wings and tail black; upper wing-coverts black with broad external margins the color of the back. Lores, indistinct superciliary stripes, and sides of the face a little brighter than the crown; chin and throat a little brighter, between Ox-blood Red and Carmine, becoming a little darker (though still brighter than the sides of the head) on the upper breast where the color grades insensibly into the rich Carmine of the lower breast, sides, flanks, and under tail-coverts. The middle of the belly is traversed by a black longitudinal stripe which is more or less mixed with red and appears as a row of black spots on the anterior portion, down to the lower belly where it is purer black. Under wing-coverts black. Wing 80 mm.; tail 75; culmen from base 18; exposed culmen 14; tarsus 21.

Females have the forehead Pompeiian Red, passing into Blackish Brown on the crown and nape; fore part of the crown with narrow whitish shaft-lines which do not reach the tips of the feathers and which are lost in the dull gray basal areas of the occipital feathers. Back between Madder Brown and Diamine Brown; lower back and rump Pompeiian Red which becomes brighter on the upper tail-coverts, approaching Brazil Red. Lores, superciliaries, and sides of face Pompeiian Red; hinder ear-coverts like the occiput. Chin Dragon's-blood Red with whitish shaft-lines; throat blackish brown with a faint wash of brighter red; breast between Madder Brown and Pompeiian Red, passing into clear Pompeiian Red on the remaining under parts. Wings and tail brownish black; upper wing-coverts edged with the color of the back; under wing-coverts dark vinaceous.

A male from Vista Alegre, Perú, is darker than the type and has the black subterminal areas of the upper tail-coverts reaching nearer the tips of the longer feathers (as it does sometimes in *melanogaster*), while the black of the belly is broader and extends a little farther anteriorly. Apparently this specimen is simply a dark example of the new race which is comparable to certain dark examples of *melanogaster* but which is still brighter than the brightest examples of the typical form.

Two females from Vista Alegre hardly differ from two females of *melanogaster* from Moyobamba. There is a little greater suffusion of Pompeiian Red in the Madder Brown of the chest which is quite noticeable in one of the Vista Alegre birds. Two other specimens of *melanogaster* are quite noticeably different from the first two and from the Vista Alegre birds, since they lack the whitish chin and pale reddish forehead.

Two young males of *transitus* from Vista Alegre are much like the females but are duller above, with the crown paler and with the shaft-lines broader

and extending to the nape. One of these specimens has the throat Dusky Brown, the upper breast Mineral Red, and the lower breast and sides between Mineral Red and Corinthian Red; the other lacks the heavy dusky suffusion of the upper breast and has this region dull Madder Brown, not strongly differentiated from the throat or from the lower breast and flanks. In four young males of *melanogaster* the throat and breast are as dark as in the females.

In describing this new race it becomes necessary to examine the status of Swainson's species, *Rhamphopsis melanogaster*. This species was described from "Peru," being based on a specimen in W. Hooker's collection; the exact locality is unknown and the type is lost. Swainson's description is not exact enough to be of much assistance in the separation of the two Peruvian races. It says that the bird is "above brownish black" (unlike *transitus*), with the "head, throat and breast reddish chestnut—of the same dark color as in *R. atrococcineus*" (hardly like *transitus*), "but the rump and sides of the body are bright crimson; which color blends into the darker hue of the throat upon the breast" (which applies to *transitus* but in a general way describes specimens from northern Perú as well). Beyond this, the probability is much greater that Hooker's specimen came from northern Perú than that it was taken in the almost unknown interior to the southward, and, furthermore, it is the more northern form which has been recognized in more recent years and described by various authors under the names of *luciani* and *melanogaster*. Accordingly I have restricted the older name, *melanogaster*, to the northern birds and would suggest, as type locality, Moyobamba, whence specimens are recorded by both Taczanowski and Berlepsch.

A comparison of the type specimen of "*Rhamphocelus luciani*" of Lafresnaye (No. 77011, Museum of Comparative Zoology; Lafresnaye collection No. 3019) with five adult males of *melanogaster* from northern Perú, reveals unquestionable identity. The type of *luciani* is somewhat darker, less reddish, on the top of the head; the interscapulars are about as in a Moyobamba bird, though a trifle duller black; the rump and upper tail-coverts are faintly deeper red; the under parts are about as in north-Peruvian specimens, with the under tail-coverts slightly inclined to brownish—one longer covert is uniform dusky black; the deep red of the throat is prolonged over the breast and is then rather sharply defined against the paler hue of the posterior under parts, with the blackish median areas of the feathers producing a noticeably streaked appearance on the upper flanks, exactly as in one Moyobamba male. Wings and tail black, slightly brownish in tone. Wing 81.5 mm.; tail 77; tarsus 21.5.

The darker and duller appearance of some parts of the type of *luciani* may be due to age and post mortem change; the general aspect is much duller than is indicated in Prêtre's plate which accompanies Lafresnaye's article in the *Magazin de Zoologie* (1839, pl. 2). In length of tail the specimen comes exactly within the range of variability of *melanogaster* but exceeds the dimensions of seventeen males of *R. dimidiatus* which, like *luciani*, was described from Carthage. Moreover, in comparison with *dimidiatus*, the type of *luciani* has the black of the mantle longer,

reaching farther posteriorly, as it does in *melanogaster*. It is evident, therefore, that *luciani* can not be the same as *dimidiatus*, as might be supposed from the identity of type localities as given by the describer, and it is equally certain that Carthagena is not the actual type locality of *luciani* which certainly came from northern Perú. N. Perú should, therefore, be substituted for Carthagena as type locality of *luciani*.

My males of *transitus* are decidedly similar in many ways to the males of *dimidiatus* from Colombia and Venezuela, though they are somewhat darker above and paler below. In *dimidiatus* the breast is deeper red but similarly graduated into the color of the lower breast and flanks. Thus *transitus* seems to be somewhere intermediate between *melanogaster* and *dimidiatus*, although the two latter forms are separated from each other by a region in which no representative of either species occurs. The females show no such intermediacy. Those of *melanogaster* and *transitus* are very similar while *dimidiatus* females are separable from both the others by their clear dusky black throat, upper breast, and forehead, and by their brighter, redder rump. The relationship is very close, however, and I would not be surprised in the future to find sufficient evidence to justify placing *melanogaster* and *transitus* in the *dimidiatus* group.

Among the specimens examined in this connection are two from the W. S. Church collection in the U. S. National Museum, labeled as coming from the "Upper Huallaga" and the "Headwaters of the Huallaga R." respectively. Dr. Wetmore advises me that a number of the birds in Church's collection were obtained in Lima where they had been sent by the Prefect of the Department of Amazonas who had secured them from the Indians in his part of the country; they were without given localities but were said to have come from the upper waters of the Huallaga. Evidently the two specimens in question are from this source. The probability is that they came from the head of navigation on the Huallaga since the actual source of the river is high in the temperate zone where this genus is not found. This head of navigation is between Chasuta and Yurimaguas, within the range of typical *melanogaster*, to which form the specimens unquestionably belong.

Specimens examined:

- R. m. melanogaster*—Perú: Moyobamba 3 ♂ ad., 4 ♂ imm., 4 ♀; "Upper Huallaga" and "Headwaters of Huallaga R." (=lower Huallaga); 2 ♂¹; "Cartagena" (=n. Perú) 1 ♂² (type of *R. luciani* Lafr.).
R. m. transitus—Perú: Vista Alegre 1 ♂ ad. (type), 2 ♂ imm., 2 ♀; Chinchao 1 ♂.
R. d. dimidiatus—Venezuela: Colón, Táchira 1 ♂ 1 ♀; Encontrados, Zulía 4 ♂ 4 ♀; Catumbo 5 ♂ 4 ♀; Orope, Zulía 2 ♀. Colombia: Chicoral, Tolima 1 ♂; "Bogotá" 1 ♂ 2 ♀; Río Caquetá 1 ♂; Atrata 1 ♂ 1 ♀; Cuenta 3 ♂; Cauca Valley 1 ♀; San Augustin, Huila 1 ♀.
R. d. isthmicus—Panamá: Colón 4 ♂ ad., 1 ♂ imm., 1 ♀; Agua Dulce 1 ♂.

¹Specimens in U. S. National Museum, Washington, D. C.

²Specimen in Museum of Comparative Zoology, Cambridge.